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ABSTRACT

This bibliography lists 30 basic references to the metric system. In addition to the author, title, and publication data, each listing includes a brief annotation and the Library of Congress catalog number. (SD)

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THE METRIC SYSTEM:

A BIBLIOGRAPHY OF BASIC REFERENCES

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SE 021 178

The Metric System:

A Bibliography of Basic References

In 1821 John Quincy Adams presented to Congress a report dealing with the modernization of the United States measurement system. After four years of investigation, Adams concluded that while the metric system approached "the ideal perfection of uniformity applied to weights and measures" the time for its introduction was not right. He rejected the system.

One-hundred and fifty-four years later the time has come. Today the United States is the only major nation in the world which has not converted to the metric system. In order to be able to participate profitably in the increasingly competitive field of international business and trade, the United States must convert. Each year the pressures become stronger. The question no longer seems to be will the United States convert to the metric system or even when but how.

There have been through the years several forms of the metric system. In 1960 the General Conference on Weights and Measures, the international authority on matters concerning units of measurement, adopted a universal system of weights and measures. This system, Le Système International d'Unités (SI), is today the most widely accepted form of the metric system.

Individual companies have already begun the conversion process. Their need to compete in the international market has made this inevitable. The orientation of the general public, however, is another problem. The purpose of the following is to provide a basic, working bibliography for use by libraries in building collections to aid in this orientation. It is not comprehensive, but is designed to include titles of a basic instructional nature, as well as those which are technical.

SI METRICATION

QC 82 E37 REF — Clason, W.E. (comp.). Elsevier's Lexicon of International and National Units. New York: Elsevier Pub. Co., 1964.

A guide to meaning and value of internationally and nationally used units. International units, arranged alphabetically by unit, have definitions in English followed by same word in ten different languages.

QC 93 B86x ENGR — Page, Chester H., and Paul Vigoureux. The International System of Units (SI Washington: National Bureau of Standards, 1972.

Translation of the French "Le Système International d'Unités." Reviews history of metrics, base and derived units of SI system, and units outside this system.

QC 91 B87x ENGR — Burton, D.C.P., and P. Leighton. Metrication and Technical Education. London: Pitman Pub., 1970.

Begins with historical background and description of the SI system. Followed by review of general problems associated with its introduction into technical education. Discussion of conversion of the workshop and laboratory to metric standards.

QC 91 C46 ENGR — Chiswell, Barry, and E.C.M. Grigg. SI Units. Sydney, New York: J. Wiley and Sons Australasia, 1971.

Basic information about SI system. History, definitions of units, rules for their use. Tables of physical quantities, symbols and units. Tables of conversion largest part of book.

QC 91 D5 ENGR — Diamant, Rudolph Maximilian Eugen. Understanding SI Metrication. London: Angus and Robertson, 1970.

History of weights and measures. Reasons for change to SI system. Explanation of SI system. Metrication as used in various disciplines. One chapter on simple and compound conversion factors.

QC 91 D64 1970 CIRC — Donovan, Frank Robert. Prepare Now for a Metric Future. New York: Weybright and Talley, 1970.

Narrative history of weights and measures from the caveman to present day. Systems compared. Metric system reviewed. Conversion efforts of various countries related. Where U.S. stands today.

QC 91 G55 CIRC — Gilbert, Thomas F., and Marilyn B. Gilbert. Thinking Metric. New York: Wiley, 1973.

Self-instructional guide to the metric system. Includes exercises, problems, and self-tests.

QC
91
G73
CIRC

Great Britain. Standing Committee on Metrication. Change to the Metric System in the United Kingdom: Report. London: H.M. Stationery Office, 1968.

Report of Standing Joint Committee on Metrication on setting up basic guidelines for change to the metric system in the United Kingdom.

QC
91
G75
1973
ENGR

Green, Marvin H. International and Metric Units of Measurement. 2d ed. New York: Chemical Pub. Co., 1973.

Up-to-date compilation of units of measurement and their conversion factors. Appendix: comparison of international and U.S. customary units.

QC
91
L44
1973
REF

Le Maraic, A.L. The Complete Metric System with the International System of Units (SI). Somers, New York: Abbey Books, 1973.

Brief introduction to SI system. Physical constants and conversion factors. U.S. customary and international metric with two-way conversion tables. Guide to use of SI system with special tables.

QC
91
M45
1969
ENGR

Mechtly, E.A. The International System of Units; Physical Constants and Conversion Factors. Washington: National Aeronautics and Space Administration, 1969.

Brief history of SI system. Definitions of SI units and tables of numerical factors for converting as approved for use by NASA.

QC
91
M46x
LMC

Metric Weights and Measures (Filmstrip and tape cassette. 15 min.) Library Filmstrip Center, 1969.

Presents basic metric units of length, mass, volume. Prefixes and their meanings. Simple problems of conversion and conversion factors.

QC
91
N37x
1968
ENGR

National Conference on the Change to the International System (SI) Units for Energy, London, 1968. Proceedings. London: Ministry of Technology, 1969.

Reproduction of papers presented at conference along with summaries of discussion from the floor.

QC
91
P7x
LMC

Kozma, Paul. Preparing a metrication program in a company; a new task for the industrial engineer (Audiorecord). Development Digest, 1974.

Part of cassette library for industrial engineers.

QC 91 S55 CIRC

Smart, James R. Metric Math: the Modernized Metric System (SI). Monterey, Calif.: Brooks/Cole Pub. Co., 1974.

Discusses historical development of metric system. Definitions and concepts. How to convert from one unit of measurement to another. Exercise sets and laboratory activities allow book to be used as classroom text.

QC 91 U58x ENGR

U.S. National Bureau of Standards. U.S. Metric Study: Interim Report. Washington, D.C.: National Bureau of Standards, 1971.

Results of substudies of U.S. Metric Study. Topics include history of metric controversy, testimony of nationally representative groups, effects of conversion on U.S.

QC 92 U54 K43x ENGR

Keller, John J. Metric Manual; Development, Considerations, Tables, Comparisons, Definitions for Metrication in U.S.A. Neenah, Wis.: J.J. Keller and Associates, Inc., 1974.

Designed "to give interested persons . . . the background necessary to understand the full implications of conversion." Includes: history of measurement; development of metrology; metric training; business and professional concerns; organizations; comparisons; tables.

QC 92 U54 K44 ENGR

Metric system guide. Neenah, Wis.: J.J. Keller and Associates, Inc., 1975.

Five volume loose-leaf series "concerns the metric system and its adaptability to the U.S." Contents: 1. Metrication in the U.S.; 2. Legislation and regulatory controls; 3. Metric units edition; 4. Metric reference edition; 5. Definitions and terminology.

QC 92 U54 G76 CIRC OVERSIZE

Groner, Alex, and George A.W. Boehm. Going Metric. New York: Amacom, 1973.

Report of American Management Association survey "conducted to determine U.S. management's current attitude" toward SI metrication and its state of preparedness for conversion.

QC 92 U54 T87 CIRC

Turner, Rufus P. Metrics for the Millions. Indianapolis: H.W. Sams, 1974.

Through comparison with U.S. system, strives to explain metric system in simplified terms. Discusses various classes of metric units and how to convert. Practice exercises at the end of each chapter.

QC 93 P57 CIRC OVERSIZE — Ploutz, Paul F. The Metric System; a Programmed Approach. Columbus, Ohio: Merrill, 1972.

Programmed manual containing the basic essentials of metric measurement required for mathematics and for science laboratory programs.

QC 94 L48 ENGR — Lewis, Gerwyn Elidor David. Metric and Other Conversion Tables. London: Longman, 1973.

Introduction to the units, symbols, and definitions of SI system. Conversion tables occupy most of the book.

QC 94 R65 1972 REF — Ronningen, Helmer A. Metrics: Measurement for Tomorrow. New York: Collier Books, 1972.

The fingertip guide to quick, easy, accurate conversion for consumers, travelers, students, businessmen, engineers. Simplified explanation of metrics with use of tables, graphs, and charts.

QC 94 S44 1972b ENGR — Sellers, Robert C. (ed.). Basic Training Guide to the New Metrics and SI Units. Washington, D.C.: National Tool, Die and Precision Machining Association, 1972.

Basic introduction to metric-SI system. Part one; quick introduction for non-technical personnel; includes brief history of metric system, definitions, symbols, etc. Part two: SI units in technical work.

QC 94 S45 ENGR and REF — Semioli, William J., and Paul B. Schubert. Conversion Tables for SI Metrication. New York: Industrial Press, 1974.

Designed to assist engineers and those in related technical disciplines. Brief introduction to SI system. Extensive list of useful conversion tables for more common SI and English units (these tables occupy most of the book).

QC 95 P76x 1972a ENGR — Gat, Uri (ed.). Proceedings: the International System of Units (SI) and What It Involves. Lexington: University of Kentucky, 1972.

Papers presented at conference on such topics as cost of conversion, conversion of machine tools, tooling and gaging, legal and legislative implications, educating for SI conversion, consumers conversions, etc.

QC 95 R35 ENGR — Ramaswamy, G.S., and V.V.L. Rao. SI Units; a Source Book. New Delhi: Tata McGraw-Hill Pub. Co., 1971.

After brief introduction to units and standards in general and SI system in particular, discusses SI units in physics, in primary and secondary education, and in engineering and science.

TH 860 C76 ENGR — Crocker, Alan E. Module and Metric: the Theory and Practice of Dimensional Co-ordination in Metric. New York: Praeger, 1971.

Explanation of metrication and dimensional co-ordination.

ANSI Z210.1 ENGR — American National Standards Institute. Metric Practice Guide (Z210.1). New York: ANSI, 1973.

Guidelines offered by ASTM for use of SI in ASTM standards and in the standards of commerce and industry. Sections on SI units, symbols, rules for style and usage, rules for conversion and rounding.

ANSI Z210.2 ENGR — American National Standards Institute. IEEE Recommended Practice: Rules for the Use of Units of the International System of Units. (Z210.2) New York: ANSI, 1971.

Guidelines issued by Institute of Electrical and Electronics Engineers Standards Committee for use of SI units.